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SUMMARY

The establishment of the Management Information System, International Logistics integrated data base was accomplished at great expense of resources by the Navy.

The goals of the system are to keep Navy financial and supply records compatible and accurate with a minimum of resources. With this idea paper I will demonstrate that these goals cannot be achieved without additional data base structural changes. My recommendation is one proposed course of action.



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INTRODUCTION

The Navy Foreign Military Sales (FMS) and Grant Aid data base is recorded and maintained in the Management Information System for International Logistics (MISIL). The data base is under the control of the Navy International Control Office (NAVILCO) at Philadelphia, Pa.

The MISIL data base is an integrated system with a single record established and updated for both supply and financial data.

NAVILCO is responsible for receiving all supply and financial status from the DOD supply system and delivering the processed status to the Foreign Customer. The processing of this MILSTRIP status includes pushing it through a matrix that looks at the transaction (document identifier) and status codes and transforms the record to an obligation or commitment. Funds are decommitted, based on acceptable rejection status or confirmed cancellation. (Reference Tab A) Serious problems have resulted from the use of these MILSTRIP status codes which are designed primarily for supply records.

The volume of data received for processing at NAVILCO each month is increasing and this is reflected in Tab B. On hundred fifty (150) cycles are completed per year.

The MISIL data base is currently maintained on two Burroughs Model 3500s with switchable disc sets. MISIL core contains 960 KD bytes. Additional disc drives for storage can

be added with a maximum of on-line storage of 1,218 million bytes.

The size and complexity of the integrated data base has made MISIL unmanagable. Errors in the data base are extremely difficult to detect and even more complicated to correct. Supply transactions must be suspended for approximately thirty-seven hours for normal month-end financial and supply reporting to be accomplished. Financial errors detected during the report cycle often require complete reprocessing with additional lost time. NAVILCO currently maintains history records on 4,000 FMS cases and approximately one-half million detail MILSTRIP records in the Open Requisition File. These data are stored in seventeen major files.

There are alternate methods of storage and update available to increase the processing volume. Records at the Navy International Logistics Control Office (NAVILCO) indicate a steady growth in the number of supply and financial transactions received. These volumes are reflected in Tab B.

DISCUSSION

The integrated MISIL data base requires that approximately 55,000 requisitions and financial transactions be input per cycle. Status received is an additional 5500 per cycle. The volume input to this data base requires that supply programs be available on-line from 7:30 AM to 4 PM daily Monday through Friday. Financial and supply reports can be prepared with the supply and terminal programs on-line and running; however, the speed of processing these data is so slow that it has made this concept unworkable. As a result the supply operations and terminals programs are suspended for two to five days monthly. This means an annual loss of 24 to 60 processing days. Backlogs are generated during this period and then gradually reduced until the next report cycle; at that time the backlog begins to grow again.

Errors detected in reports frequently require that the data base be corrected and reports regenerated. This can extend the down time and increase the build-up of the backlog. Programming lead time for corrections to MISIL application programs is an average of 30 to 60 days. Lead time for major revisions is generally six to twelve months after completion of the requirements specification.

The Status of Funds (NC 2025) reports are due to NAVCOMPT by the 10th workday after the months end. The expenditure on the NC 2025 must match values of the detail billing cards

which are due to the Security Assistance Accounting Center (SAAC) by the 15th after the month end. These detail billing cards are Foreign Military Sales (FMS) transactions which the SAAC edits and processes to the FMS customer bill on a quarterly basis. FMS customers pay the U. S. Treasury the value due on the bill. Errors detected in the MISIL data base may require corrections and reprocessing of these billings. The run time of these financial reports is approximately thirty-seven hours per month.

Grant Aid and Foreign Military Sales supply reports are also generated during this same monthly report cycle. These supply reports include the monthly Program Manager Report for Navy SYSCOMS and the Required Availability Report for the Chief of Navy Materiel. These reports are due by the 20th after months end closing. The Syscoms use the Program Manager Report to review supply actions performed by their Designated Implementing Agencies and other DOD supply components. Late receipt of this report precludes Navy Program Managers from accurate and timely reprogramming of obligation authority. This report is also used to detect errors in the MISIL data base such as duplicate or invalid obligations and expenditures. Errors in the MISIL data base can cause invalid rejections of new inputs (requisitions) and delay timely FMS case closure actions. SAAC and the Defense Security Assistance Agency measure the military services performance by accuracy of the detail billing cards; timeliness of the Status of Funds report and promptness of FMS case closures.

The complexity of MISIL programs required to establish and maintain the MISIL integrated data-base makes correction of errors extremely difficult for both Operations personnel and application programmers. The current design of the MISIL programs may require as many as five transactions to correct an error. Six transactions may be required to establish and update a contract line from commitment through expenditure. Reference Tab A.

Following are discussed several alternate proposals to alleviate the current problems with the MISIL data-base:

1. NAVSUP and NAVDAC should upgrade the Dual B3500 units to a single B4800. This will increase the speed of transaction processing and should reduce time required to process monthly supply and financial reports. This option is already in the coordination cycle and will be implemented in January 81. Based on my experience with the system, this alone will be inadequate. The current problems in correcting errors detected in the MISIL data base will not be resolved by faster disc processing and greater storage capacity.

2. NAVILCO has proposed and is currently exploring the possibility of splitting the data base to two complete series of files. One set of files would contain Iran's and would be updated less frequently than the daily cycle. I concur in this concept as a quick-fix since Iran is currently a suspended country. However, with the political possibility of Iran being reinstated, at some future time, this action will not solve the long-range problem. Neither will it provide for the overall

expansion of the FMS program which the new administration is advocating.

3. The third proposal is for NAVSUP/NAVILCO to explore a split to the MISIL data base to separate supply and financial files. This would require an abbreviated financial record to be stored on minicomputers and under the direct control of the Comptroller. The advantages/disadvantages are discussed in the following paragraphs.

(a) Supply Records are presently established based on input of a DOD MILSTRIP supply request (Document Identifier of AO1/AO5 or a similar local document in the XO series). (Ref Tab A) These supply records are fairly stable formats and application programs are relatively simple. DOD MILSTRIP changes are normally implemented in an orderly manner and allow time for accurate supply analysis and programming since the activity sets its own implementation date. These programs could be maintained as is, except for elimination of the portion that updates the general ledger accounts. MISIL purge programs could be simplified to report the item as "supply complete" and coding of the record for purge from active supply files.

(b) FMS financial case and requisition detail records could be established in an abbreviated and simplified record. This action could be direct to the minicomputer data-base and all input would be completed by the comptroller. A single input from terminals could create on-line obligation records. A single input would create a financial detail record coded

directly by the accountant as committed or obligated. The current MISIL data base does not allow direct financial coding. MISIL programs require as many as four separate inputs to establish a record, code it with the contract data and update it ready for the expenditure processing. MISIL programs could be simplified and the workload reduced accordingly.

(c) Changes to the FMS financial programs are not constrained by formal review and implementation stages. Changes are received as they are generated, either by political expediency or by policies directed by DSAA and OASD. Normally these must be implemented within 30-60 days and simplified programs from the keyboard would greatly reduce the Navy programming workload at the Fleet Materiel Support Office. This concept is not possible unless the current MISIL programs are restructured. Some examples of the rapidity of required financial changes follow:

(1) The Department of Defense stock fund accounts were not able to compensate for the rapid rate of inflation in FY 79 & 80. In March 80 all military services and the Security Assistance Center were directed to rebill all stock fund shipments made to foreign customers after 1 Oct 79 for an additional 14 1/2% of the standard price. A March 80 implementation data was required.

(2) Contract Audit Services charges for FMS contracts have migrated between SAAC and the military departments three times since 1978. The last implementation date was 1 Oct 80, and this was directed in Sep 80.

(3) FMS Delivery Source Codes impact the billing computation for transportation on shipments made to foreign customers. These codes have had three complete revisions since 1978. These revisions are directed by OASD (Comptroller) and require review and revision of approximately one-half million detail requisitions. Experience has proved that most financial changes have not required revision to the MISIL supply records. If MISIL financial records can be transferred to minicomputers the long lead time for program changes can be eliminated. Minicomputers can be programmed by analyst-user with a minimum of training.

Conclusion: The long lead time for MISIL application programs coupled with the frequency of financial changes to the system create a serious roadblock for the Navy. This roadblock could be resolved by splitting the financial data bases to separate minicomputers.

RECOMMENDATION

A. NAVSUP should establish a workshop to determine the feasibility of establishing two separate supply/financial data bases. The accounting data base would be under the direct control of the NAVILCO Comptroller. The supply data base would be under the control of the Operations personnel.

B. NAVSUP should request NAVDAC assistance to explore the feasibility of recording the accounting data base on mini-computers. These minis would be physically located within the Comptroller department and under his direct control.

TAB A

Input Required (by
Document Identified/Status)

Remarks

- | | |
|--|--|
| 1. Record input

*AOE/AO5 | 1. Establishes record and records

the commitment value in the

general ledger account. |
| 2. Record update

*AE3 (BA, BV or
Cancellation C series
status) | 2. Updates record with supply

status codes and standard
price. When drop from inven-
tory status is received the
record is decommitted and
obligated. Cancellations
result in cancellation of
the commitment. |
| 3. Input of Contract and
Shipment status

*AB3

*AS3 (BA)

*AE3 (B7 Status) | 3. Records contract number.

Records shipment of stock or
contract item.

Price changes for contracts.
This input changes standard
price to contract price. |
| 4. Input of Expenditure
Values

*Y1/Y2 (Expenditure) | 4. Deobligates and expends the

value. |

* Inputs must be received and processed in sequence or rejection occurs. Most corrections to records requires separate input to remove the data and separate input to record the correct data.

TAB B

Calendar Year Input

	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>
1. Requisitions & Expenditure			*637,285	**
2. Supply Status			2,785,042	
Total			3,422,327	

* Decrease reflects political suspension of Iran

**

TAB B

Calendar Year Input

	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u> **
1. Requisitions & Expenditure	814,926	769,977	*637,285	
2. Supply Status	1,808,000	1,711,200	2,785,042	
Total	2,622,986	2,481,117	3,422,327	

* Decrease reflects political suspension of Iran

** Not yet available

